ART 34 AMDT

CLAIMS

1) Inspecting system for thin security supports, of the type wherein a transportation device is apt to transport said thin support past an image acquiring device, wherein said transportation device is a rotating cylinder (10) provided with transparent sectors (10a, 10b) of a size at least equal to that of the portion of the security support to be inspected and wherein a transparency inspecting device is placed partially inside and partially outside the cylinder so that the electromagnetic inspecting beam is intercepted by said supports held lying onto said transparent sectors, characterised in that said transportation cylinder comprises a gripping system for said security support having a pivoting gripping element (11) cooperating with at least a radially movable block (12), the gripping point of the security support being able to be lowered relative to the nominal rotational diameter thereof so as not to interfere with calibration blades (13) fixedly placed in proximity of the inspection axis and strictly adjacent to said rotating cylinder.

2) Inspecting system as in claim 1), wherein said transparent sectors are covered, on the security support bearing side, by a thin removable transparent protective layer.

3) Inspecting system as in any of the preceding claims, wherein an optical path is defined between an illuminating device (3) of said inspecting system and an acquisition camera, said path comprising lens (21) which focuses the light source onto a focal point (F), through which said thin security support is made to pass as a target, along the optical path at or upstream of said lens (21) shading means (22) being provided apt to define a cone of shade (5) only in correspondence of sensitive elements of said camera (5).

4) Inspecting system as in claim 3), wherein said shading means (5) is a semitransparent material layer due to which, in the absence of a target to be inspected, said camera (5) does not exceed the saturation threshold which would otherwise corrupt the quality of the image.

5) Inspecting system as in claim 4), wherein said semitransparent material is easily replaceable.

6) Inspecting system as in claims 4) or 5), wherein said semitransparent material, in the absence of a target, allows the camera at most to reach but not exceed the saturation threshold.

7) Inspecting system as in any one of the claims 3) to 6), wherein said shading

means is so transparent and sized as not to absorb more than 10% of the light intensity hitting the target.

8) Inspecting system as in any one of the claims 3) to 7), wherein said illuminating device has reflecting surfaces at its side ends.

9) Transparency inspection system for security supports, of the type wherein an illuminating device (3) is placed at the opposite side of an acquisition camera (5) relative to a security support to be inspected, characterised in that said illuminating device is placed substantially on the same optical axis of said acquisition camera (5), said path comprising lens (21) which focuses the light source onto a focal point (F) through which said security support is made to pass as a target and in that it has along the optical path at or upstream of said lens (21) partial-shading means (22) apt to define a cone of shade (S) at camera sensitive elements.

10) Inspecting system as in claim 9), wherein said shading means (22) is a semitransparent material layer such as, in the absence of a target to inspect, said camera does not exceed the saturation threshold, which would otherwise corrupt the quality of the image.

11) Inspecting system as in claim 10), wherein said semitransparent material is easily replaceable.

12) Inspecting system as in claims 10) or 11), wherein said semitransparent material, in the absence of a target, allows the camera at most to reach but not exceed the saturation threshold.

13) Inspecting system as in any one of the claims 9) to 12), wherein said security support is made to pass past the camera adhering to a transportation cylinder (10) having transparent sectors at least at the portion of the support to be inspected, said camera or said illuminating device being fixed inside the transportation cylinder.

14) Method for homogenising the distribution of light on a target in a value sheet inspecting system, of the type comprising the application of a homogenising filter between the light source and the target, characterised in that said filter is made by printing a pattern of more or less spaced and/or wide lines or dots onto a substantially transparent means, on the basis of a previous target reading, performed with said inspecting system.